



**CONESTOGA-ROVERS  
& ASSOCIATES**

US EPA RECORDS CENTER REGION 5



489271

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January 5, 2011

Reference No. 056394

Mr. Michael Berkoff  
Remedial Project Manager  
U.S. Environmental Protection Agency - Region V  
77 West Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Dear Mr. Berkoff:

Re: Soil and Groundwater Investigation Work Plan  
Fannie Pell Park Western Bridge Footing  
Former Plainwell, Inc. Mill Property  
Plainwell, Michigan

## **1.0 INTRODUCTION**

This letter has been prepared to present a soil and groundwater investigation work plan (Work Plan) for the Fannie Pell Park western bridge footing, which will be located on the former Plainwell, Inc. Mill Property (Site) located at 200 Allegan Street in Plainwell, Michigan. Conestoga-Rovers & Associates (CRA), on behalf of Weyerhaeuser Company (Weyerhaeuser) and the City of Plainwell, has prepared this document for the United States Environmental Protection Agency (U.S. EPA) Region 5. This Work Plan is being submitted in accordance with the terms of the consent decree for the Design and Implementation of Certain Response Actions at Operable Unit No. 4 and the Plainwell, Inc. Mill Property Operable Unit No. 7 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree), which became effective February 22, 2005. A Remedial Investigation/Feasibility Study (RI/FS) is currently under way at the Site.

This Work Plan describes additional subsurface investigation activities proposed in the northeast portion of the Site, adjacent to the Mill Race leading to the Kalamazoo River, where a concrete footing will be constructed for the Fannie Pell Park Bridge. A former Plainwell, Inc. Mill Property layout plan is provided on Figure 1.

## **2.0 SCOPE OF WORK**

The Scope of Work (SOW) for this Work Plan includes the advancement of two soil borings and the collection and analysis of soil and groundwater samples. The investigation field work will adhere to the methods and procedures specified in the Phase II RI Work Plan dated November 20, 2009, as approved by the U.S. EPA on January 19, 2010. Additionally, the SOW includes the laboratory analysis of soil and groundwater samples consistent with the protocols set forth in the Multi-Area Quality Assurance Project Plan (QAPP) dated September 23, 2009 and the Multi-Area Field Sampling Plan (FSP) dated November 20, 2009, submitted to the U.S. EPA under separate cover.

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## **2.1 SOIL BORING INSTALLATION**

Two soil borings (SB-2014 and SB-2015) will be advanced in the area of the proposed bridge footing utilizing Geoprobe™ direct push technology with continuous macrocore sampling. Borings will be advanced to the water table. The proposed soil boring locations are presented on Figure 2.

Soil samples will be collected continuously at 2-foot intervals, logged, examined by a CRA geologist for visual/olfactory evidence of impact, and screened with an 11.7 electron volt (eV) bulb photoionization detector (PID), in accordance with the Phase II RI Work Plan.

Upon completion of soil and groundwater sample collection, each soil boring will be abandoned by backfilling the soil boring annulus with bentonite chips to the ground surface and properly hydrating.

A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan.

## **2.2 SAMPLING PROCEDURES**

All sampling will be performed in accordance with the procedures outlined below and in a manner consistent with the QAPP and the FSP. Analytical protocols and parameters are presented in Section 3.0.

### **2.2.1 SOIL SAMPLE COLLECTION**

Soil samples will be selected for laboratory analysis according to 'Sampling Program 2' as described in the Phase II RI Work Plan as the following:

- One surficial soil sample will be collected from each boring.
- If no impact noted, a discrete soil sample will be collected from 0 to 2 feet above the interface of the vadose and saturated zone. If impact noted, one soil sample will be collected within 2 to 10 feet bgs and a third sample collected from 0 to 2 feet above the interface of vadose and saturated zone.

Soil samples will be placed into pre-cleaned laboratory provided containers, labeled, and submitted to the laboratory under chain-of-custody (COC) protocol. A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan.



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### **2.2.2 GRAB GROUNDWATER SAMPLE COLLECTION**

One grab groundwater sample will be collected for laboratory analysis utilizing U.S. EPA low flow purging (LFP) and sampling techniques as outlined in the Phase II RI Work Plan.

The groundwater sample will be placed into pre-cleaned laboratory provided containers, labeled, and submitted to the laboratory under COC protocol. A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan.

### **2.3 DECONTAMINATION**

Upon mobilization to the Site and prior to drilling commencement, the drill rig and all associated equipment will be thoroughly cleaned using a high pressure, low volume steam wash and inspected. Before initiating drilling at each subsequent location, the drill rig and other associated equipment will be decontaminated to prevent cross-contamination.

All non-disposable sampling equipment will be decontaminated prior to each use by using an Alconox wash, potable water rinse, followed by a deionized water rinse and allowed to air dry.

All generated decontamination water will be visually examined and screened with a PID. All decontamination water will be containerized in DOT approved 55-gallon drums for future characterization and disposal.

### **2.4 MANAGEMENT OF INVESTIGATION-DERIVED WASTE (IDW)**

IDW generated during the implementation of this Work Plan will be managed and disposed off Site, consistent with the protocols set forth in the Multi-Area FSP.

### **3.0 ANALYTICAL PROTOCOLS**

Soil and groundwater samples collected will be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide, polychlorinated biphenyls (PCBs), and general chemistry parameters including nitrogen and phosphorus compounds in accordance with the Phase II RI Work Plan. Based on the results of TAL metals analysis, soil samples will also be analyzed for Synthetic Precipitation Leaching Procedure (SPLP) metals. All samples, including Quality Control/Quality Assurance (QA/QC) samples, will be collected and analyzed according to the protocols set forth in the Phase II RI Work Plan and QAPP.



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#### **4.0 ANALYTICAL DATA EVALUATION**

Upon receipt and completion of data validation in accordance with the QAPP, analytical results for the soil and groundwater samples will be evaluated against the Generic Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective December 21, 2002, pursuant to Part 201, Environmental Remediation, 1994 PA 451 as amended (Part 201 Criteria). These results will be used in conjunction with analytical results for soil and groundwater samples collected from SB-280, SB-284, and MW-16 during the Supplemental RI conducted in 2010. If exceedances of the Part 201 Criteria are identified in the soil or groundwater samples, proposed measures, which may include additional sampling activities, will be presented to and discussed with the U.S. EPA to further evaluate and address the identified impacts.

#### **5.0 PROJECT SCHEDULE**

Upon approval, CRA will mobilize and initiate sampling in January 2011 depending on weather and Site conditions.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

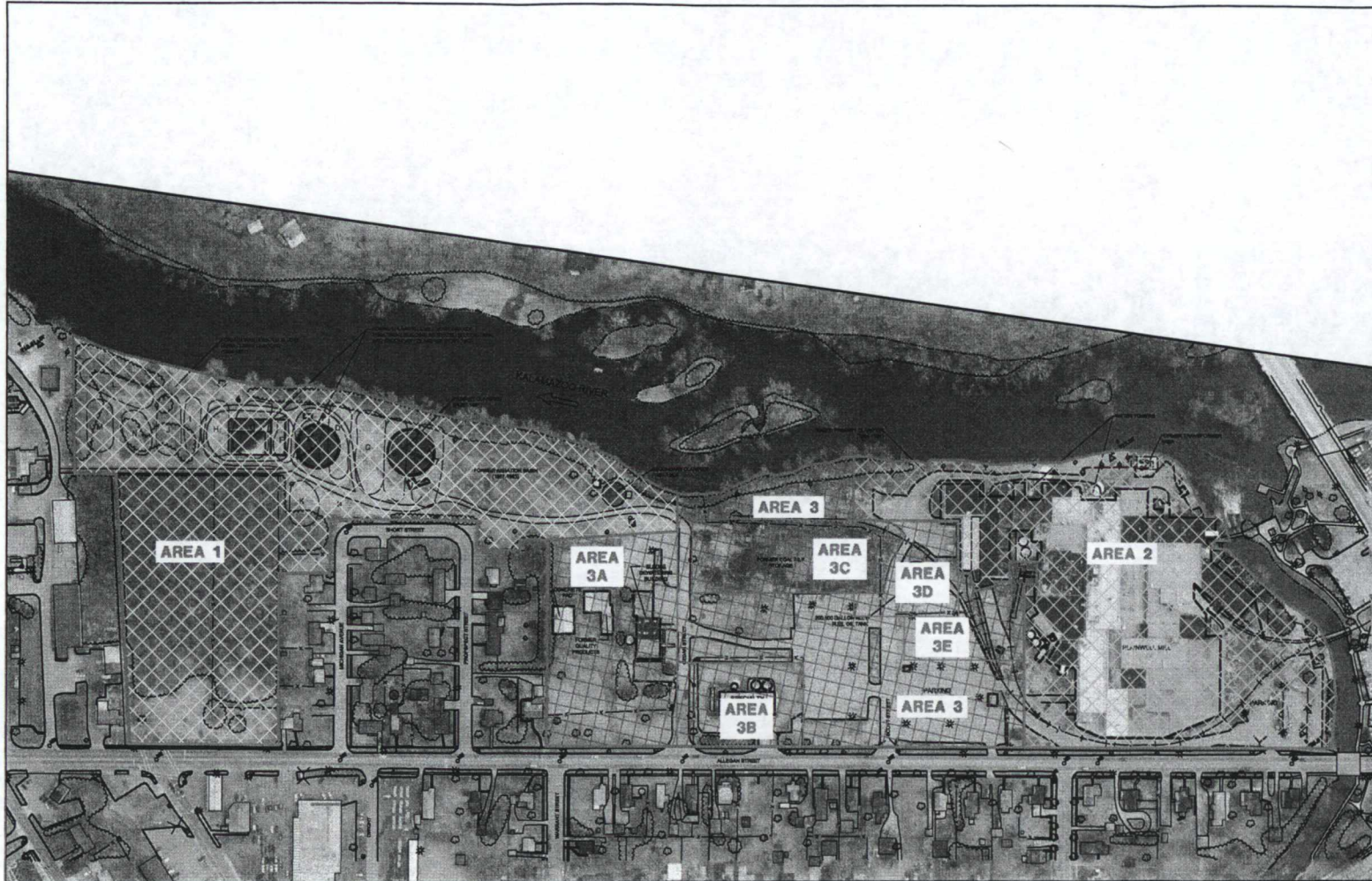
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Gregory A. Carli, P. E.

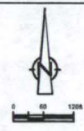
JQ/ds/3/Lan.

Encl.

cc: Paul Bucholtz (MDNRE) - three hard copies  
John Bradley (MDNRE) - electronic only  
Jim Saric (U.S. EPA) - electronic only  
Erik Wilson (City of Plainwell) - electronic only  
Richard Gay (Weyerhaeuser) - electronic only  
Joe Jackowski (Weyerhaeuser) - electronic only  
Martin Lebo (Weyerhaeuser) - electronic only  
Michael Erickson (Arcadis) - electronic only  
Dawn Penniman (Arcadis) - electronic only  
Garry Griffith (Georgia-Pacific, LLC) - electronic only  
Jeffrey Lifka (Tetra Tech) - electronic only  
Jennifer Quigley (CRA) - electronic only  
Wayne Bauman (CRA) - electronic only



NO.	Revision	Date	Initial



LEGEND	
	AREA BOUNDARY
	SHORELINE
	FORMER WASTEWATER SLUDGE DEWATERING LAGOONS
	FENCELINE
	RAILWAY
	WOODED/VEGETATION
	UTILITY POLE
	LIGHT POLE
	MANHOLE
	BOY

SCALE VERIFICATION	
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.	

Approved	

DRAWING STATUS	

FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN

FORMER PLAINWELL, INC. MILL PROPERTY LAYOUT



Project Manager: G. CARLI	Reviewed By: L. CLARK	Date: NOVEMBER 2016
Scale: 1"=20'	Project No.: 056394-05	Report No.: BERK003
		Drawing No.: Figure 1



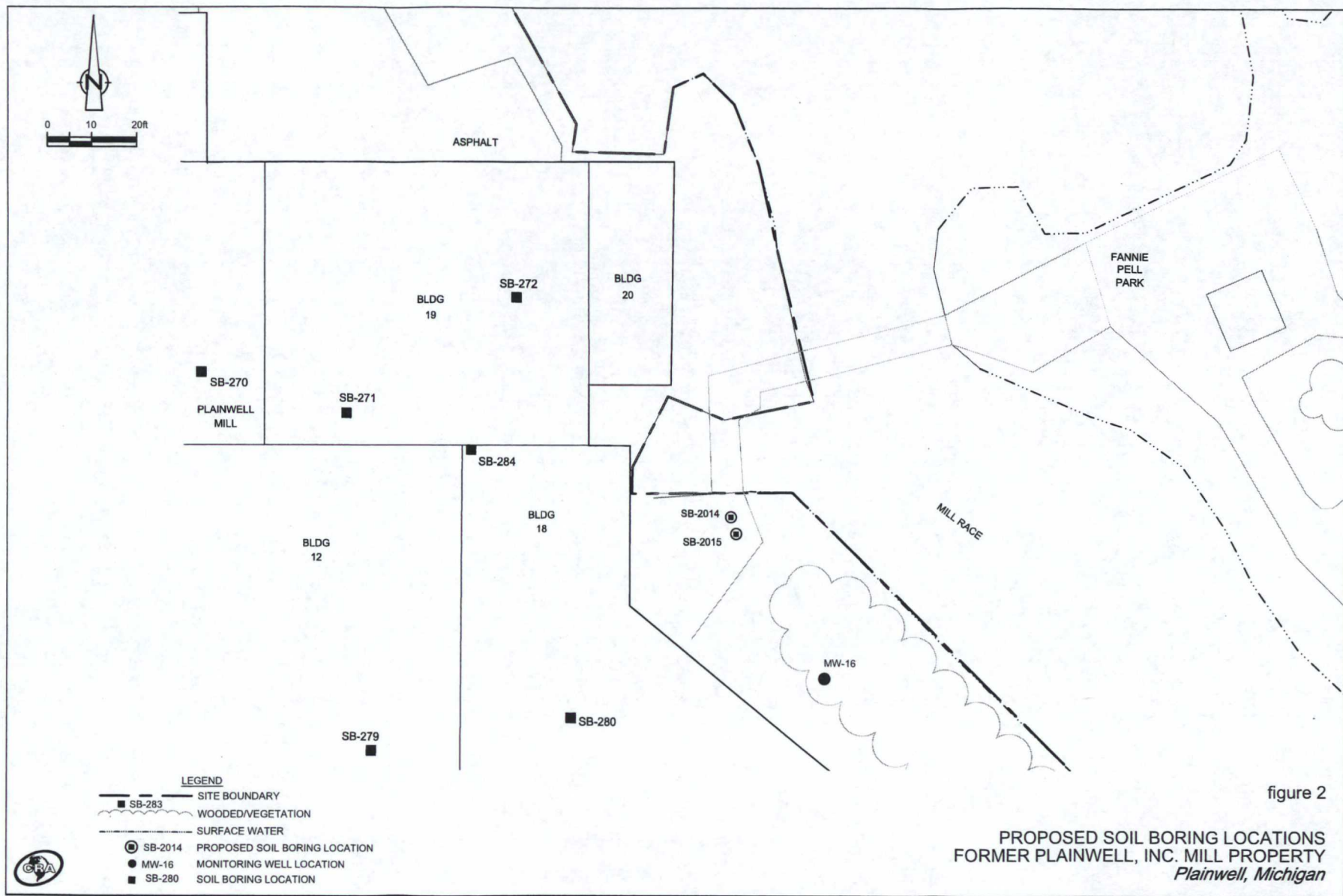


figure 2